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The Home Economist

and The American Food Journal

ALICE BRADLEY

MARCH, 1928

Merry L. Hunter
Thomas J. Keenan
Edwin Tarrisse
Jennie Rees Bear
Helen Raymond
Marjorie M. Heseltine

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"IT LEAFS"

THE HOME ECONOMIST

and THE AMERICAN FOOD JOURNAL

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ONE BY ONE, all the questions that have been raised about Evaporated Milk are being answered in its favor. The notion once widely prevailed that the calcium content was made less readily available in Evaporated Milk, because of the effect of the heat of sterilization.

In a University of Chicago Dissertation, 1926, (Published in The Journal of Biological Chemistry, October 1927) Dr. Alice Caroline Willard summarizes experiments on this subject as follows:

"For the children, the diet with Evaporated Milk resulted in a higher phosphorous retention in all four cases, and a higher nitrogen and calcium retention in three of the four.

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THE HOME ECONOMIST
and THE AMERICAN FOOD JOURNAL

What is a Home Information Center?

By JENNIE REES BEAR
Director, Holyoke Home Information Center, Inc.

JENNIE R. BEAR

WE have been acquainted with many "Centers" — Health Centers, Nutrition Centers, Community Centers, and others. In each case the name given is descriptive of a definite piece of work that is done. So when someone says: "Home Information Center," we respond at once with "Yes a place where you get information about homes," and go no further.

Home Information Centers are undoubtedly a relic of the urban conservation centers of the world war period. Some Home Information Centers are these self-same Centers which would not die, while others have been organized since the war. Urban centers for the purpose of giving information to homes are located in various parts of the country, and called by various names. They may be considered city sisters to the present rural homemaking work under the Smith Lever Law, but it must be remembered that the needs of these sisters are not necessarily the same. So far, these City centers —probably not called by the name of Home Information Center except in New England—have had no real connection with each other. Within the last eighteen months, there has been a definite movement — through the organization of the American Homemakers, Inc.—to bring these various centers into some relation with each other, though this relation has not yet been worked out.

The Home Information Center at Holyoke, Massachusetts, is the largest of these centers. It is one of the war Centers that would not die. Its survival was made possible by financial aid from the City of Holyoke, and the Hampden County Extension Service, and by the cooperation of the State and County Home Economics Specialists in the work program — this cooperation was due to the fact that the rural group leader plan was used in the Center.

In 1924, new quarters were given by the Service League Foundation — an organization founded on funds from the late Frank J. Beebe estate given to help people to help themselves. At that time, owing to the arrival of a new director, the policy swung toward limitation of the field of service to adult homemaking; toward self determination of individual goals and toward trained leadership.

Now instead of the rural extension plan of voluntary group leaders, we have women who can and have made their living previously by their skill in a certain field, lead every group in the Center who is doing work in that field. Within each group, every woman may easily have a very different problem from that of any other woman. The woman who comes for service determines what she wishes to do, when she wishes to come, when she wishes to leave, and how much she wishes to do outside. In other words, she is treated as an adult, capable of knowing what she wants and when she gets it.

Home Information Center since 1925

There is, of course, no presentation of a class lesson when every woman's problem is unlike that of any other woman in the room, when one woman must come three-quarters of an hour after the room is opened, while another has been served and is out of the building in the same three-quarters of an hour.

There are no longer large exhibits of the work done. The public, the teacher, and the homemaker served can apply one measure of the success of the undertaking, that is, the satisfactions of the woman served. That these satisfactions are very great is shown by the increasing number of individuals who wish to come, the increase in the number of visits they make, and by the happiness of the staff in the service they render.

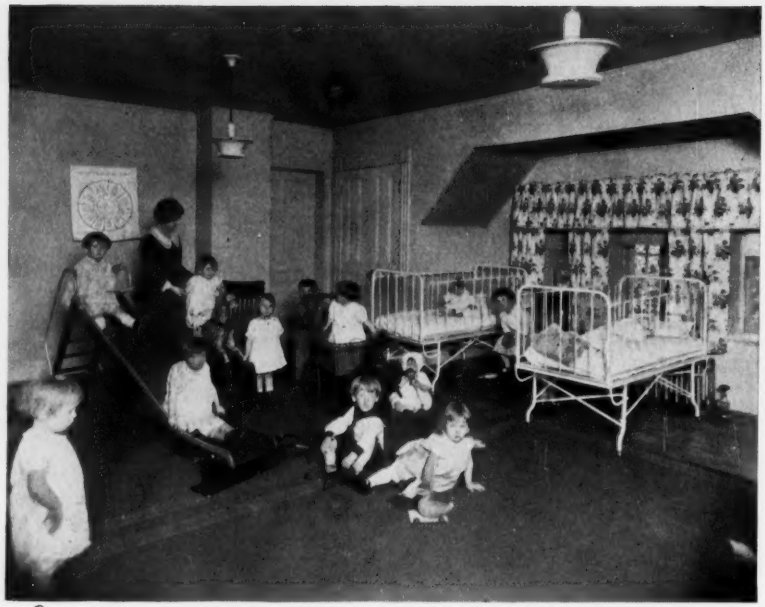
Each year brings an increase of, from 33 to 35 per cent in the individuals who come to the Center for information and a corresponding increase in the number of visits they make. Fourteen hundred and one (1401) individual women registered for group work during 1927. Some of these registered in several groups, so that the total number of registrations were 1878. During last year 17,394 visits were made by the women to the Center for service. These figures would have been greatly exceeded if we had not been forced to close in May, and again in November because of lack of funds.

The quarters, staff and budget are probably the smallest that ever endeavored to care for so many people. The Janitor's back has almost been broken in forcing him to move our equipment a couple of times a day to make it possible for various types of classes to occupy the same room. The staff has been working morning, afternoon and evening in a way that is positively condemnable and which money alone would never have made possible. It has grown to a place where advertising is no longer needed. You ask how has this been done? By prayer and perseverance the spirit of a real

home has been developed in the Center. Nothing has been done to bring it about that would not have to be done in a fine home. Every member of the working group, from the janitor and teachers through to the office force has helped to create and to maintain this spirit. That it exists is not a visionary dream of the Director, it is often spoken of by women who come in.

One woman said last week, "Do you remember when the snow storm was so bad last winter it stopped the Northampton Street cars that I walked all the way to my class?" Then she said, "You see, this is my only club and I mean to attend." Anither woman said, "I'll tell you I'm coming to the Home Information Center on my day, whether I have a problem or whether I haven't. I'll find one and I'll be there." A member of the staff of one of our largest Educational Institutions lectured at the Home Information Center a few weeks ago. She arrived at seven, began her lecture about seven-thirty. A crowd of over 200 welcomed her, and at the close of the evening in her room she said, "I don't know how it's managed, but I have never seen such a spirit as there is here." Being asked: "How can you find any spirit here, you have only been here two hours?" She replied: "Don't ask me to say how I know, I only know that it struck me the minute I got into the room."

There are eight reasons why the Holyoke Home Information Center is a great community asset. There are eight reasons wny it is becoming a necessity of modern life.



Children taken care of in nursery while mothers learn more about homemaking

First. Our girls marry with little knowledge of homemaking and are confronted with problems which cannot wait for a course in school to solve. A bad beginning unaided does not make a good ending.

Second. Direct Service to any home is a community service because the homemaker's lack of knowledge of how to run a home affects all the members of the home, and through them affects business, industry and the whole community life.

Third. It helps with three distinct periods of adjustment in the life of the woman homemaker; when she leaves her job to go into a home or carries her job in addition to home responsibilities; when she is expecting a child or when young children would keep her from wholesome association with other women; when children are gone or grown and her interests and reasons for life must be found.

Fourth. It is democratizing and socializing because it brings classes and groups from all sections of the city into a harmonious whole. It makes friends for the stranger.

Fifth. It takes care of young children while mothers attend classes. It gives both women and children the opportunity of direct contact with others of their own age — without ill-afforded expenditure of money or energy.

Sixth. It helps families to live better without increasing their incomes. This again re-acts to the good of business and community life.

Seventh. It is possible for a woman to use needed equipment which she has neither money to buy nor room in her tiny apartment to store when it is not in use.

Eighth. In everything it encourages self-expression which brings the glow of happiness to adults as well as children.

That this fine spirit has been developed, and that a need is being met is not sufficient. There is a sacred obligation to use these numbers and this spirit to give a yet greater service to the world—a piece of work whose value does not end with today and which may contribute to all people in all parts of the world. At the present time, there is no question that is being more often raised by philosophers, by judges, by clergymen,

(Continued on page 56)

Millinery class in session

Auditorium on registration night

Chapters from the Lives of Leaders

What Is Expected of the Home Economics Woman in Business?

By ALICE BRADLEY

THE Home Economics woman has been in business for a great many years, but only recently has she been recognized as doing legitimate work.

Fannie Merritt Farmer demonstrated the use of Foss's extracts in cooking more than thirty-five years ago and about that time prepared recipes for Foss' extracts, Rumford Baking Powder, Walter Baker's cocoa and other manufactured foods. Many of these recipes and booklets are still being used, and the experimental work for some of these recipes, made easier the compiling of the Boston Cooking-School Cook Book in 1896. Since this latter book is still a best seller, it shows that as careful work was done for business concerns as for a regular book.

Home Economics trained women have been connected with magazine work since 1894 when The New England Kitchen Magazine was started with Miss Anna Barrows as one of the Editors and Ellen H. Richards on the Advisory Committee.

IN 1903 one of the first restaurants to be operated by a college woman, The Laboratory Kitchen, was opened in Boston. The standards of all restaurants have been raised because so many women have since then entered the field. At present time special courses are offered in some colleges for training tea room, restaurant and cafeteria managers.

The Home Economics Woman in Business today has had much more intensive training in Science and Art than her forerunners, and, consequently, much more is expected of her. If she is a good executive she has other trained young women to do much of the experimental work in cookery in her up-to-date laboratory.

The problems of the professional home economics woman who enters the business field today include several, seldom faced by their sisters in other fields. First of all, she is expected to be a walking encyclopedia, not only of culinary art and science and nutrition in its more restricted sense, but of any question relating to food production and consumption from the dawn of history to the present.

To meet such a requirement means not only the technical training and ability to procure source material but also a broad background of general culture. Such is the extensive side of the position; the intensive presents its difficulties, too. If the professionally trained foods person allies herself with a particular manufacturer her acquaintance with his products must be not only broad but deep. Even more carefully than when in the classroom she has to keep pace with the progress on her own section of the field. From this ever increasing mass of material she has to choose those points which are necessary for the business, whether she is an employer, an employee, or a free lance.

THE political ramifications of the various home economics problems cannot always be overlooked. The serve as "guide, counsellor and friend" to both producer and consumer is a unique test of ability. Yet for the woman with professional training and keen business sense there is an unusual opportunity for presenting material to the public. Through her contributions to the facts used in much of the national food advertising, she is reaching a far greater number than she could possibly hope to influence through the classroom. Although her ideals should always be those of an educator, she must learn to use the commercial methods of the moment. This means cooperating with the advertising department and agencies, following the elusive trail of public opinion, and helping the manufacturer to create new uses for his product.

My own experience in the commercial field really dates from 1915. Soon after Miss Farmer's death, when I had been for only a short time Principal of Miss Farmer's School of Cookery, the advertising manager for Sunkist oranges came to see me in regard to getting out a booklet for them. "This is my first big job," said he, "and I want it to be done as well as possible." "This is my first booklet and I want it done as well as possible, also," said I. Every recipe was carefully tested and accurately written, and many were photographed.

THIS careful work has characterized all the material put out by Miss Farmer's School of Cookery from that day to this. Dishes must taste good, look well, be not too difficult of preparation, and not too different from well known recipes. Recipes must be carefully and accurately written. Scarcely one has ever gone out without having been proofread at least twice, first the carbon on which slight changes are usually made, and last the final copy just before it is mailed, and we make it a point to try to see printed proof before final publication.

My desk has always been in the next room to a school kitchen and I have personally sampled practically every dish, the recipe for which has been prepared here for publication in magazine or booklet.

Much publicity was given to me as well as to the oranges after the making of my first booklet, and other advertisers came for material for booklets and pamphlets, recipes and photographs.

Meanwhile two magazine articles have been prepared and written each month; many of the recipes included in these have first been perfected for and presented to our weekly demonstration audiences.

Newspaper and syndicated articles have sometimes been solicited and supplied and now broadcasting for a dozen different concerns in a one-half hour talk is occupying two mornings a week.

ALL this work could not have been as economically and practically done had it not been for the teachers and the equipment that were needed to carry on the school. All of the experimental work was done when kitchens and teachers were free, although this free time is more and more difficult to secure as classes have increased. The really large amount of material that has gone out from the School during these twelve years could not have been prepared had not my sister assumed the business management of the School, my teachers taken on most of the teaching and my secretary cooperated most efficiently.

As more and more of the adequately trained home economics women enter the business field, the whole level of the profession will be raised. There are still many business firms, however, which are retaining the purely commercial type of worker because they are not yet thoroughly convinced that the scientifically trained person can make as compelling an appeal to the public. Despite a prejudice among some against the latter, the majority of the leading manufacturers are seeking food specialists whose professional status will bear close inspection provided, of course, that she has business acumen and an abundance of the creative impulse.

Strange Foods of Other Lands

By EDWIN TARRISSE
Washington, D. C.

ALL sorts of curious items are found in the world's list of edible things, that is, edible from the standpoint of some one race or other. While every nation has its staple dishes, the odds and ends, it would seem, are more interesting and in their way more indicative of the general status of the civilization of those partaking of them.

Generally speaking, mankind has an instinctive dislike of reptiles of every kind and degree, yet of the four families into which the older naturalists divide them—the surian, ophidian, batrachian, and chelonian—each affords sustenance to man—civilized or savage. So in some parts of the world it is a "cut from the alligator," not "from the joint."

WHAT is held by some to be a peculiarly dainty and nourishing dish is made with the iguana, the flesh of which is as white as that of chicken and just as palatable, we are told; though the appearance of the reptile, with its scaly, blackspotted green coat, is more repulsive than either crocodile or alligator. To the inhabitants of the West Indies and the Bahamas the iguana is a much-valued source of food, and is hunted down by means of dogs, which are muzzled to prevent them from using their teeth and damaging the iguanas, which are sold alive, or killed, salted and barreled for home consumption. The flesh of the reptile is usually served boiled or steamed, together with a dish of clarified iguana fat, sometimes seasoned, into which the very savory meat is dipped as it is eaten. The eggs of the iguana are also much relished, and are like hens' eggs in taste, but wholly filled with yolk and do not become hard in boiling. The horrid iguana of the Dominican Republic is much appreciated by the bon vivants in the West Indies, the flesh tasting just like roebuck's, although infinitely more delicate.

THE common green lizard is eaten with much gusto by many tribes in Africa; and in the south of Portugal the gray lizard is eaten, both baked and fried, the dish in both instances tasting rather like chicken. In Brazil a green-and-yellow snake is consumed by all classes; while among the Sardinians the adder is frequently added to broths and soups.

Crocodile flesh is publicly sold in the meat markets of Senaar, in Africa; and in Siam one sees the carcasses hung up for sale like sheep in the butchers' shops. The flesh of this great aquatic lizard tastes somewhat like veal, we are told, although to Occidentals it has a faint fishy smell. In South America the cayman, or alligator, affords a dish, which, when boiled or fried, is said to be just as tasty as rabbit. Both crocodile and alligator eggs are much prized by certain nations. The natives of Madagascar are particularly fond of the first and the Siamese prize the second as a great dainty. In flavor the eggs are said to resemble those of a duck that feeds mostly among the sea refuse of a fore shore, plus a very faint seasoning of musk. It is the green sea turtle, though, that has won the highest commendations as an edible reptile. It is this species that is used in the preparation of the hereditary dish—Green Turtle Soup, served at most of the city banquets throughout England. The supply of turtles for England and Europe are sent from Jamaica and the Antilles, the favorite resort of these much-prized reptiles which travel hundreds of miles in order to deposit their eggs.

A SINGLE turtle of the Amazon is a heavy load for a strong man; but though much larger than the Caribbean species, it is coarser in flesh. At Ega every house has its turtle pond, which is stocked for the winter when the Amazon runs low. There are several excellent methods of preparing turtle for the table. The Brazilians cut steaks from the breast and roast them; the lean parts are also roasted; sausages are made of the stomach, and the entrails are used in preparing stock for soup. The usual way is just the simple one of boiling the turtle in its own shell. Newly hatched turtle, with the remains of the yolk inside it, is particularly dainty and nourishing in the opinion of many people.

On the continent the tortoise takes the place of the turtle, where the reptiles are fattened on bread and lettuce leaves, that is to say, in normal times. The mud tortoise is preferred in Provence and Languedoc, where, as in Italy and Greece, its blood is drunk, and its eggs and flesh are cooked to satisfy the Lenten hunger of the devout, the tortoise being considered by the clergy as a fish.

OF the batrachians used as food the frog is of course the most popular and most historical; the French, Germans, Italians and Belgians, all being noted throughout the centuries for their frog-eating proclivities. The frog is in best condition for the table in autumn, just before it takes to the water for the winter; but is most popular as food during the spring, for it is easier then to catch. The French usually eat only the hind quarters, dressed in wine, or served with a white sauce, when it is an exceedingly dainty and nourishing dish, finer in flavor than chicken. But the Germans and the Walloons of Belgium use every part of the animal save the skin and the intestines. The species in favor for table purposes is that known as the green frog, though the red frog, much eaten in Italy, is just as good. There is no doubt whatever that the toad is often served in place of the frog in countries where frogs are much used.

But there are many tastes in the dietary of the nations. In many parts of Europe bear's flesh is in great demand, even by the wealthy, being esteemed a great delicacy; and smoked bear's tongue and hams are also highly prized. From bear liver are made sausages dear to the stomachs of the Teuton.

TIGER flesh is eaten in many parts of India, though it is somewhat tough and sinewy. Lion's flesh is very good to eat, we are assured, and much in favor among the Hottentots and other South African tribes, who are also fond of rhinoceros steak. Rhinoceros flesh is said to taste something like beef and pork blended.

But it is elephant's foot which wins most tributes in South Africa, and there are Europeans who agree with the natives. Those who have eaten the baked foot of an elephant have gone so far as to say that it is a dish for a king. The flesh of the elephant may resemble, when cooked, nothing more than a composition of soft leather and glue, but these experts declare there is nothing like the foot. This is cut off at the knee-joint; then a hole about three feet deep is dug in the ground, and the sides of it are baked hard with burning wood. The embers are removed in time, and the foot is placed in the hole, which is then filled up with earth tightly packed down. A great fire is built above it, and kept blazing for three hours. At the end of that time the foot is removed, and the casing of hide and earth peeled off. The flesh is now like a jelly, and may be eaten with a spoon. It is said to be one of the great delicacies in the world.

IF we were hard pushed for an animal food, it would be a long time before bats were chosen for a desirable addition to the table; but the French in Tahiti and other islands of the South Seas find the "flying fox," a bat measuring some fifteen inches across the wings, an especially edible crea-

(Continued on page 74)

The Story of Tea

By THOMAS J. KEENAN

ALTHOUGH the consumption of tea appears to be decidedly on the increase in the United States, there does not seem to be corresponding increase in knowledge on the part of the consuming public of sources or blends of tea, for it is still commonly understood that the flowery names given to teas refer to individual species of the plant. It is not generally appreciated that all teas have a common botanical origin irrespective of their fancy names, Pekoe, Flowery Pekoe, Orange Pekoe, Oolong, Congou, Young Hyson, etc.

All the teas of commerce have their origin in an evergreen tree, which is credited with a life of about thirty years. The tree is known to botanists as Camellia Thea, and the parent species is believed to have originated in a province of India bordering on China, namely Assam.

The real date and the origin of the discovery of tea as a beverage is lost in ancient history. Some credit it to the Chinese two thousand years or more before the advent of the Christian era. It is said that at that time Chin-nung, celebrated as a philosopher and scholar and the source of nearly all of Chinese agricultural and medical knowledge, was cooking his evening meal over a fire made of the branches of the tea plant. Some of the leaves of the plant fell into the vessel in which he was boiling water and made the first "pot of tea." On tasting the beverage he found it so exhilarating in effect that he soon got into the habit of using it. Other accounts credit its first use as a medicine and its discovery to Japan and to India. Whatever its source, its use rapidly developed, though it was not known in Europe much before the 16th century—then the Dutch East India Company introduced it into Holland. In 1657 we find it in England, a rare luxury only to be indulged in by the aristocratic class. In 1680 the American colonies were using it in limited quantities at the rate of five and six dollars a pound for the cheapest grades. At this time China was the acknowledged leader of the tea industry and continued so for many years.

In 1834 the tea plant was for the first time cultivated in Assam. Today India has more than seven hundred thousand acres under cultivation and produces annually a crop of three hundred and ninety million pounds (1926). In addition to this huge amount there are millions of pounds of tea grown in Ceylon, Java, China and Japan. In fact there is no other beverage, with the exception of water that has so wide a use.

In cultivation the tea plant is pruned to a low bush, the leaves of which can be gathered only at certain seasons, or rather intervals, during the year, this depending somewhat on the occurrence of rains; new growths start on the stems of the plant in wet weather. When the tree is three years old picking of leaves is begun by the cultivators, and after four more years of growth the bush is cut down. New shoots then arise from the root and bear fine leaves in abundance.

PLUCKING GREEN LEAF
(Courtesy of India Tea Association)

The best and finest crop is gathered in April when the new leaves burst from thier buds, a second, third and fourth crop of increasingly inferior leaves being obtained later in the season.

The fresh leaves do not have the odor or flavor of tea; these are qualities which are developed in the curing processes. Different grades of tea are obtained from the same plant, though as stated, there is a general impression that the terms Flowery Pekoe, Orange Pekoe, Oolong, Congou, Souchong, Ceylon, Uncolored Japan, India, Java, etc., refer to distinct species of tea plants. Either black tea or green tea may be made from the

same plant depending on the treatment of the leaves after picking. Or the name may denote the country where the tea was grown.

In collecting the crop of tea only the tips of the stems are taken, including the terminal bud and a few young leaves just below it. The leaves intended for black tea undergo a process of fermentation after having been spread on trays and allowed to wilt for twenty-four hours and subjected to pressure between rolls by which they are curled in the familiar form known to all tea users. The green tea is made by a simpler process, the entire omission or curtailment of fermentation being a point observed in its production. It was, however, the custom at one time to dye leaves intended to be sold as green teas with a mixture of gypsum and prussian blue. Green teas are known by name in the order of their quality, as Young Hyson, Hyson No. 1, Hyson No. 2, Imperial and Gunpowder or Dust.

Teas are sorted by passing them through screens or sieves of various meshes. The smallest and youngest leaves pass through the finer meshes and constitute the choicest parts, while the older and larger leaves with less attractive flavor pass only through the larger meshes.

The youngest and top leaves of the tea shrub yield the very choicest and most sought-after variety of tea. An infusion of the younger leaves and immature buds is characterized by a delicate flavor and aroma as well as the absence of the black color and bitter taste that distinguish many ordinary teas. The top buds and the young leaves just below the buds yield the true Pekoe; the second picking, consisting of the next youngest leaves, is called Flowery Pekoe; and the next Orange Pekoe. The term "pekoe" refers to the downy appearance of the under sides and ends of the young leaves. The color of the newest leaves and the tips of the leaf buds is on the orange tone; therefore the name "orange pekoe." Souchong and Congou are names applied to the large leaves on the lower stems, the leaves nearest the base of the plant being known as Souchong. Souchong tea is characterized by color rather than fragrance or aroma and is best used as a blend for the finer light-colored teas.

It should be known that the difference in appearance, qualities and names of teas have to do either with the age of the leaf, the part of the plant from which it is taken, or the country of origin, China, Japan, India, Ceylon, Java, Sumatar or Natal. Much tea is grown in Java and used in Holland. It is easy for an expert tea taster to discriminate between tea from China and the other countries named.

Oolong like kaolin, another word derived from the Chinese, is an English rendering of the Chinese name of a range of hills in the province of Fukien, known as Wu-lung, meaning "Mist Dragon" Mountains.

It is quite in keeping with the history of tea dealing that the preferred grade of Oolong tea used in this country should not come from Fukien province, China, but from the Island of Formosa, which was ceded to Japan following the Chinese-Japanese war, the same island from which all or nearly all of the gum camphor of commerce is obtained. In a historical sense, Formosa Oolong is a China tea, and is rightfully considered the best quality of commercial black tea.

A blend of China and Ceylon teas in the proportion of about one of Ceylon to three of China is good, but blends of India and Ceylon teas are also well liked. The best blend of India and Ceylon teas is said to be produced by mixing three parts of India tea with one part of Ceylon.

TEA SHOOTS
(Courtesy of India Tea Association)

Tea, when properly made, is one of the most refreshing drinks known, and can be used in moderate quantities by adults without fear of disturbing results. Almost all food specialists are, however, agreed that children should not have tea. It is a stimulant and, as such, is likely to affect the nervous system of growing boys and girls.

The stimulating quality of tea is due to the element Theine. This is a substance closely related to the caffeine found in coffee. The flavor and fragrance of tea come from its essential oil. Besides these two substances tea also contains tannin which gives it piquancy and is responsible for the "body" of the brew. Tannin is an astringent element and is only extracted by long infusion.

What Is A Home Information Center?

(Continued from page 52)

and by thoughtful laymen than questions of the permanency and value of our American homes.

Heretofore all studies of home life have been made of abnormal homes. We have at present no means of saying whether the causes found by Judge Hoffman and his associates, and the various Family Welfare Associations, are causes of unhappy family life everywhere. We only know that the veil has not been lifted from the so-called normal home. We need to know today the relation that exists between mothers and daughters when the daughters grow up into fine women giving a definite service to their kind. We need to know the relation that exists between the mother and son when the son grow up into useful and respected manhood. We need to know the relation the same boy and girl maintained toward the father, and last but not least, we wish to know the things which are the greatest factors in destroying relations that bring about such worth while young men and women. These studies of family life are not the only valuable studies that could be made through the work of the Centers. There are many others. For instance, it would seem to any studious observer that this work should be able to make a very definite contribution to methods and curricula of adult homemaking education in general. Certainly the greatest service that the Holyoke Home Information Center can possibly give to the world today is through such studies as these.

It is possibly true that the numerical success of the Holyoke Home Information Center has been partly because the major group of the attendants have begun, even though dimly, to sense the fact that there are contributions which their life experience, and their desires may make to and through the fields of modern thoughts. One cannot expect the average committee in charge of a Home Information Center in the average town or city to care to make such contributions—possibly they prefer to think that during their lifetime, they have tended to make the homes of their city a little more prosperous, and let it go at that. It is therefore, unlikely that money for studies of home life will be obtained by the average Center through its own locality. It will have to be obtained through the efforts of people who have the broader viewpoint in regard to service.

AMONG OURSELVES

THIS issue marks another step in our development — the combination of THE AMERICAN FOOD JOURNAL and THE HOME ECONOMIST. The American Food Journal has been important in the field of food science for many years, and in combining the two magazines it is our purpose to give you, Madame Teacher a better opportunity to learn about the methods of modern food distribution, packeting, research and food legislation, in addition to broadcasting your opportunities for keeping in touch with the work being done by other home economists.

Nor have we slighted you, Mr. Manufacturer, the staunch supporter of THE AMERICAN FOOD JOURNAL for so many years. The pages of the new combined magazine offer you the chance to keep in touch with the development of home economics work in schools and colleges. In view of the very large number of pupils that are being taught home economics subjects and the number of teachers training for home economics work, it is of decided advantage to the far seeing manufacturers to know something of how their future customers are being trained in the purchasing and use of food, clothing and household equipment. You will also have the opportunity to tell what you yourselves have done or are doing in the line of commercial home economics work that is directed to helping teachers as well as housewives.

It is our aim to present in these pages something of all of the phases of home economics. In order to get the broader grasp of the subject the teacher should know what the manufacturer is doing as well as what other teachers are doing; the manufacturer should certainly keep in touch with what is being taught concerning the use of his equipment or product. Each of us has something to contribute for the benefit of others. These pages will always be open for informal and frank discussion by both sides.

The Small Town Milk Supply

ONE of the first things the child is taught when he goes to school is the value of milk. He is told to drink his quart a day and emphasis is placed on its health giving qualities. Campaigns of this sort are valuable because milk is the one nearly perfect nutrient, but if your school is located in a small town it is well first to be sure that the milk supply is a safe one. The report of a survey made of 142 small towns and cities in three states and one Canadian province by representatives of the American Child Health Association cooperating with the Conference of State and Provincial Authorities and the Association of State Dairy, Food and Drug Officials shows some rather startling results. Out of one hundred and seventeen towns with a population of less than twenty-five thousand, ninety-seven do not pasteurize their milk. The Journal of the American Medical Association recently made comment of the fact that the smaller towns and rural communities using raw milk are chiefly responsible for the outbreaks of milk-borne diseases that are still epidemic in this country. In only two of the towns or cities above mentioned was most of the milk found to be clean. Fifty-one cities gave a positive test for B. coli in fifty per cent or more of the supplies tested, and twenty-one cities a positive test in more than seventy-five per cent. In one hundred and nine towns and cities the milk was not kept on ice while being delivered and in seventy-one instances registered 55 degrees at the time it was delivered. However, the large cities — those over one hundred thousand population — showed a decided contrast. In sixty of these that were surveyed, thirty reported more than ninety per cent of their supplies pasteurized.

New York City's Parents' Exposition

THE United Parents' Association of New York City will hold a rather unique exposition beginning April 21st — unique in that it will be the first that is devoted entirely to showing what the community's educational, social, civic and industrial experts have been doing for the past fifteen or twenty years to enrich home life, produce better citizens and make housekeeping a happier and more efficient profession. Nationally known educators in home economics, nutrition, child nurture and child nature are cooperating to develop a program that will best present these phases of home life.

Dr. Benjamin R. Andrews of Teachers College is chairman of the group planning and arranging the home economics exhibits which promise to be especially interesting. Dr. Mary Schwartz Rose is taking active charge of the food exhibit. In this connection will be shown the best dietary for a specimen family of parents, a boy of 12 and a girl of 10, living on incomes of two, three and four thousand dollars a year. A clothing group under the direction of Miss Lillian H. Dooke, of Teachers College, is planning a colorful and interesting exhibit.

Such an exposition marks a step forward in the modern educational effort that is being made to link more closely the theories taught in the classroom to community activities and to show the application of scientific truths to everyday practice. It is to be hoped that the results of this exposition will inspire other communities to plan similar efforts.

Home Economics for Boys

IT has long seemed to us that there are many phases of home economics that are of interest to boys as well as to girls, and we know that some schools have been rather successfully conducting cooking classes for their students of the masculine gender. Now we hear of a complete home economics course that has been worked out for boys of the last two years of high school and successfully used in the Manual Arts High School, Los Angeles, California. This includes food preparation and service; table etiquette; the duties of a host and lessons in carving; the cost of food, the problems of budgeting and financing a home, the study of savings and investments and of the legal points which safeguard a home; the principles of child-care and feeding; the study of community problems relating to health sanitation and city planning; the selection and care of clothing and home and office furnishing. The course is a well planned one and likely to fit the pupils to take their share of home and community life. One of the results has been that many of the boys have become so interested in foods and cookery that they are finding good jobs in that line and are putting their training to practical use.

The Sewing Machine—Its Use and Care

By H. A. HEY
Educational Department,
Singer Manufacturing Company

WOMAN USING MACHINE AT WINDOW
(Copyrighted 1926 by Singer Manufacturing Co.)

IN the days of our grandmothers the ability to sew a fine seam was a mark of distinction. To sew a fine seam now is just as great an art as it ever was, but in every activity the watchword of today is—the shortest cut to successful results.

Foremost among the short cut methods is the electric sewing machine. Years ago sewing machine manufacturers looked into the future and designed the sewing machine for the busy woman of today. Many changes have been made, not only in the mechanism of the machine, but in the design of the cabinet. What used to be an eyesore to all particular housekeepers, now finds its place with the best of furnishings in the modern home. The favorite console type with the head tucked away, does not give the appearance of a sewing machine, It serves many purposes in the home; can be used as a writing desk, a dressing table in "milady's boudoir," a serving table for afternoon tea, or to fill a corner in the living room.

The selection of a sewing machine is most important. The practical portable electric is just what its name suggests—a portable sewing machine. With the same sewing ability as the larger machine, the portable is reduced in size, to lessen its weight, making it convenient to use upstairs, downstairs, in the sun-parlor, or breakfast room. Inside the cover is provided a place for the box of attachments, the oiler and speed control lever.

No smallest detail has been overlooked to make sewing a pleasure; a little electric lamp just to the back of the machine, throws a soft light directly on our work and protects our eyes; the motor and machine are noiseless, except for a faint hum in the bobbin case and the latest models are equipped with right side knee controls, allowing the operator to sit in a natural position, and at ease—a light pressure against the control and the machine is in motion.

We perhaps use a machine most for straight stitching, or for doing occasional mending that requires the use of the presser foot only, but the many attachments that can be used with the modern sewing machine make possible a great many other types of stitching. It is true that on readymade dresses we find the most effective trimmings of straight rows of machine stitching, oftentimes using silk of contrasting colors, but these are quickly and easily done on the regular household machine. Have you seen the quilted sofa cushions, and the spreads for baby's crib, now being shown in fashion magazines and art departments? These are done on the sewing machine in much less time than it takes to do them by hand, and are far more effective. Then there is the couching, or ornamental stitching used on coats and tailored models, accomplished by winding the heavy thread on the round bobbin, and stitching with the right side of material next to the feed. But in styling garments, we are reminded of the hems to be made, tucks to be formed, binding applied, and of the ruffled or plaited frills. For this reason, attachments have been designed, so that our machine may be used to its fullest possibilities. The attachments should be used with as much ease as that of your scissors, for truly they are real labor saving devices, and with the aid of these attachments, the most skillful work can be done more perfectly than by hand, and in a mere fraction of the time. All those deft details that add to the beauty of the frock, are easily and quickly done. Of the many attachments, the ones most often found with a machine are the hemmer, binder, ruffler and tucker. They all have an important part in home sewing, and it would be difficult to choose one and leave the other. Hems are made, binding applied, or a ruffle is formed and added to garment, all in one operation, when without the attachment, we would use two rows of stitching, and sometimes three.

The ruffler will make ruffles of any desired fullness, at a speed of a yard a minute, and by a simple adjustment, the ruffle is changed to dainty plaitings. There is no indicator on a ruffler, to determine the amount of fullness that will be taken up. Some materials take up more fullness than others. As a test, try ruffling a six-inch piece of material into a four-inch space. Material for ruffles should be torn crosswise. For a fine ruffle use a short stitch, and scant the fullness by adjusting the screw. The material to be ruffled is inserted between the two blue blades, and drawn through the guide to the back of the blades, to insure an even heading. The garment to which the ruffle is to be attached, is placed between the second blade and the feed. If a facing is required, the material for the facing is inserted on top of the top blue blade. Plaitings about one-eighth of an inch wide may be had by making the slight adjustment explained in your instruction book. To make the plaits farther apart, lengthen the stitch on the sewing machine. To make them closer together, shorten the stitch. Lace and very fine materials may be ruffled or plaited successfully, by placing a strip of paper under the ruffler, preferably newspaper, which will easily break away. These dainty ruffles and

plaits are so effective on lingerie, house-dresses, collar and cuff sets, boudoir pillows, curtains, etc. The ruffler requires an occasional oiling of all working parts. If the ruffler does not plait or ruffle evenly, a drop of oil may remedy the trouble.

Tucking is the natural trimming for fine materials. The fashion magazines of today give numerous suggestions for tucking various garments, and with the aid of this attachment, trimmings may be made without extra cost. A tuck can be made of any width, from the finest pin tuck to a full inch tuck. The material must be creased for the first tuck, and while one tuck is being stitched, the mark for the next tuck is being made. When you examine your tucker, you discover two scales, the shorter one is the tuck scale, containing figures which indicate different widths of tucks. The long scale is the space scale, which indicates the space between tucks. The width of the tucks and the space between is determined by the adjustment of the scales. It is possible to tuck silk quite as easily as cotton material. Soft materials, such as crepe de chine and georgette are harder to crease, but may be tucked just as successfully, if a piece of paper is slipped under the tucker. A fine needle, fine thread and a fine stitch are the secrets of attractive tucking. When making cross tucking, always tuck your material lengthwise first, and it is well to press the tucks with an iron before the cross tucks are made. A glance through the fashion magazines suggests many ways of using tucks. The tucker, like the ruffler, must be oiled occasionally. The only part that requires oiling is the stud on which the marking lever works; if neglected, it becomes dry, and instead of lifting freely as the mark is made, will stay down and cause a drag on the material.

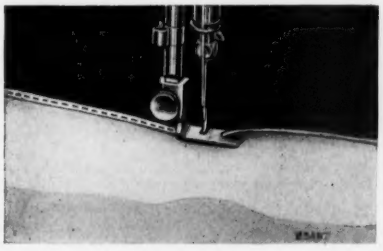
The latest type machines have only two hemmers, the presser foot hemmer for very small hems, less than an eighth of an inch wide, and the adjustable hemmer, which will make a hem of any desired width up to one inch. The secret of good hemming is to start the hem at the very edge of the material. There are several ways of starting the hem, but the most practical one is to start the hem by hand, that is, fold over about 1-16 inch of the edge of the material for about one inch, place the folded edge in the scroll of hemmer, draw the material toward you through the hemmer, lower the needle on the edge, then lower the presser bar. Hold the upper and lower threads together, and slightly pull the threads to assist in starting the hem. The same width of material must be kept in the hemmer. Hold material in a straight line and you will find it quite easy to make a perfect hem. The hemmer has many uses, not only to finish the edges of ruffles or flounces, but in making seams—the French seam, the felled seam, hemming and sewing on lace at one operation. The adjustable hemmer is found most useful for hemming towels, sheets, pillow cases, table linen, or anywhere a wide hem is desirable.

To finish seams properly in a garment is an important detail. The binder will be found very useful in this respect. It is a splendid idea to keep a few yards of bias binding in your sewing basket for this purpose. The neck and armholes of dress linings look much neater if finished with a narrow binding. No wonder the woman who uses her sewing machine has such dainty house dresses, tea aprons, curtains for breakfast room, etc., for at the notion counter of your favorite department store, you find finished bindings of all colors plain, or in stripes and checks. Taffeta binding can be purchased at the same counter. To apply the binding requires only one row of stitching. This finished binding is one-half inch wide. If you prefer to cut your binding, the strips should be about 15-16 in. wide. The cut in button-holes may be made for tailored garments, button loops or French folds can be applied, or the smart bound pockets for sport dresses.

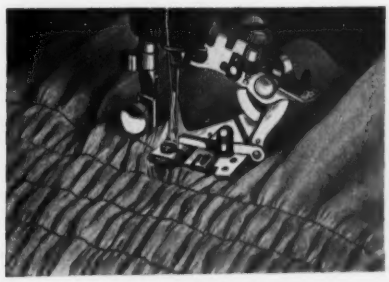
There are other special attachments being shown in the shops that will help to make your sewing machines of still greater use. Most important are the gathering foot for shirring very fine materials, the cording foot, the hemstitching attachment, braiders, darners, and button-hole attachment.

A sewing machine should be given the best of care, and, like all other machinery, will not give satisfaction if the working parts are allowed to become dry. Oil is the life of a sewing machine. If the machine is used moderately a few hours a day, oiling and cleaning once or twice a week is sufficient. One drop of oil should be applied to each bearing and each point

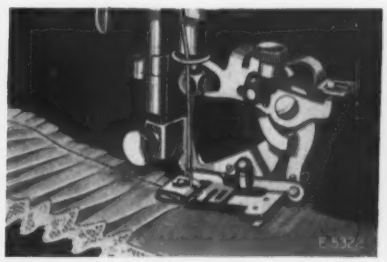
(Continued on page 70)



HEMMING



SHIRRING



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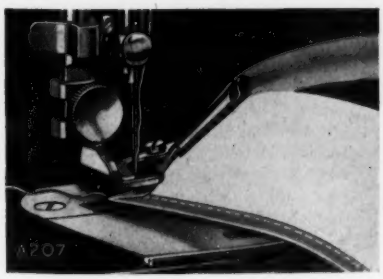
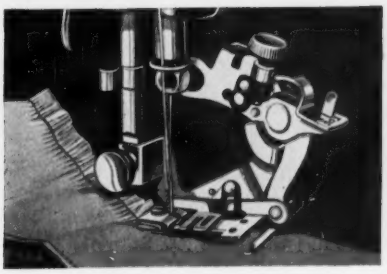
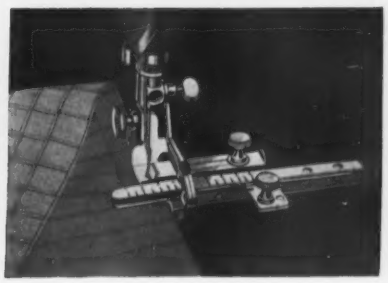


BINDING SQUARE CORNER



RUFFLING OR GATHERING

(Copyr'ghted 1926 by Singer Manufacturing Co.)



CROSS TUCKING

An Oriental lady wearing veil and voluminous robes to conceal her charms

THE STOR F

Silk the Q

By M UNT
Educational D eney

CHINESE myths date the culture of silk as far back as 2640 B. C. and tell the tale of an emperor named Huang-Ti, who discovered the use of silk for making garments and instructed his empress to experiment with the wild silk worm. While this is only a legend, silk culture unquestionably is almost as old as civilization, and when we review the qualities of silk, we can readily see why it has been the queen of fabrics throughout the ages.

When the silk fiber is drawn out it is stronger and longer than any other fiber being hundreds of yards long. Because of this length it can be woven into fabrics with a smooth surface, free from short, fuzzy ends. It is so fine that it makes the sheerest and most diaphanous of fabrics, which at the same time possess unusual wearing quality. The fiber is elastic—a silk garment will return to its original shape after a considerable amount of strain. It is a warm fabric for it does not allow the body heat to escape and it keeps out the cold air. Even dampened silk does not feel chilly against one's skin.

But today, when style plays such an important role in the choosing of one's garments, the chief qualification of silk is its beauty. Its smooth and unbroken surface gives it a fine lustre. In satin this lustre is brilliant—in crepe weaves, where the fibers are highly twisted, the lustre is dimmed but still discernible.

Still, no matter how lovely a fabric is in its own right, it must bend its knee to style, the indefinable something which makes a thing popular. And any style is the direct reflection of the customs and morals of the age. I doubt if there has ever been a style introduced (in civilized countries) that was introduced entirely for art's sake.

No less a philosopher than M. Anatol France said that if he could return to earth after a hundred years, he could tell the kind of life the people were leading, just by observing the women's clothes. And this was no idle boast of an iconoclastic scholar, because we ourselves draw our conclusions about the past, to a large extent, from the clothes worn.

We know that the Chinese woman was little better than a slave, the chattel of her husband—a doll whose feet were bound in order to tell the world that her most imperial and illustrious master could afford to keep an idle wife. Perhaps her master realized intuitively that this deformity was a successful means of keeping his wife at home. The Orientals have always kept their women indoors and closely guarded. Their clothes were heavy and cumbersome—often their faces concealed, for modesty and docility were the requirements—for their women.

In the enlightened Grecian states, the situation was different. In Sparta especially, where the maid was submitted to the same rigorous treatment as the youth, her garments were light and airy. According to Aristotle, it was Pamphilia, daughter of the King of Cos, who first unravelled the heavy silks imported from the Orient and rewove from them, a tissue so transparent as to reveal and yet conceal a woman's charms. For the Greeks, with their love of beauty and their deification of the human body, did not consider this immodest.

And in every age, where woman has more equally shared man's exalted status, her clothes have been decidedly more like the male's, giving her greater freedom of movement. Should some old philosopher, say Plato for instance, with his advanced and almost modern outlook on life, return to earth today, he would be able to analyze our era from the women's vestments. He would see a slender and energetic race of women, clad in slim garments which have been stripped of all excess material. He could tell from her unhampered movements, that the woman of today walks a great deal and plays men's games. He would realize that she is able to wear these thin, airy garments throughout the entire year because of our steam-heated houses. For the garments that a woman wears today, on the coldest day in January, would have given her grandmother pneumonia just to think of, and send that cautious lady hastening after her chest protector.

Speaking of chest protectors, where are all the undergarments of yester-

F TEXTILES

of Fabrics

By M UNTER
Cheney Brothers

year—the drawers, the chemises, corsets, corset-covers and yards of billowing underskirts? Gone! For a while it looked almost as if lingerie was going to become as extinct as the dodo, but this situation has adjusted itself and while women today certainly wear few and scanty things as compared to the past, they do wear underwear—but underwear that has likewise been adapted to suit the life of the day. Imagine a young lady, laced up in an hourglass corset and swathed in 13 yards of petticoat and further adorned by a starched shirtwaist with choker collar, playing a real game of tennis, such as Miss Wills plays. Page the smelling salts!

Perhaps woman is not yet so sensible that she will demand comfort before anything else (personally we hope she never will be) but she certainly will never again submit to a Fashion Inquisition and allow herself to be put on the rack.

Activity and sports demand that a woman remain young. In our present scheme of things there is little place for the dowager. The middle-aged woman who has taken her place has a slender figure, a sleek bobbed head and youth and animation which rival her daughter's.

Harmony in silhouette, fabric and color achieve this illusion of youth and slenderness. And more and more the costume is chosen to suit the various occasions of wear. Suitability of the fabric to the occasion and to the type of silhouette considered smartest for each occasion, is an important point. To attain successfully the desired effect, one carefully considers the characteristics of the fabric. For this reason one sees a wide variety of silks being used, from the sheers to the heavy satins, cantons and bengalines.

The ensemble becomes more and more important and a woman simply must have her costume keyed around a central theme. This central theme is practically always the dress, and forms the color keynote for shoes, stockings and hat. Even the coat is often lined to harmonize with the dress. For the woman who cannot afford many clothes, this ensemble idea is really a blessing in disguise, because by changing her accessories, she can if she is clever, give the impression of having many outfits. And think how much better dressed a woman appears today, when her various articles of clothing are closely related, than she did when she bought a hat simply because she liked it! This hat wasn't even a cousin-once-removed of the coat she was wearing, and her dress was probably as out of sympathy with the rest of her costume.

The dress of the Greeks adopted the flowing lines and lack of restraint that their mode of life necessitated

The well-dressed woman now divides her day into four or five definite periods and dresses in a manner suitable for each occasion. Her wardrobe contains sports clothes, tailored and street clothes, formal and informal afternoon, and formal and informal evening clothes. This season there is a further subdivision of the sports group into the clothes worn for active sports and those worn by the spectator. Crepe de chine, flat silk, china silk, men's shirting, shantung and tussah are used for these sports clothes. Many of these are printed, for there are many prints which have a definite sports feeling. Printed coats and scarfs form an integral part of the sports ensemble.

Street and town wear demand entirely different types of costume, and at present, crepe de chine and radium are very smart, especially so when printed with small tailored motifs. The silk coat is more popular this season than ever, and the manufacturer has outdone himself in weaving coatings of many varieties. Among the season's offerings are satin, crepe satin, bengaline, marocain, canton, rayon, rayon and wool, and silk and wool mixtures. One merely has to make a choice or choices. Paris has stamped with its approval, the coat of dull fabric, more intricately tailored than those we have been wearing for the past few seasons, and there has been a wide variety of dull coating fabrics. Many of these silk coats are made by utilizing a dull and shiny surface or by combining two different fabrics.

We have recently returned to more elegant clothing for afternoon and evening wear. And it is now not only permissible, but necessary, to have more material in one's formal gowns than we had last season. Skirts are longer, or when they are not, are given the appearance of greater length by the aid of flowing drapes and uneven hemlines. To attain this new silhouette, with its slim, slinky lines, sheer

fabrics have grown heavier so that they will flow—not flutter—in graceful, sophisticated draperies. The result is that the manufacturer has wo-

When mother was a girl she took her morning walk swathed in thirteen yards of petticoat

ven many new types of sheer fabrics, including those of a gossamer-like thinness for formal afternoon and evening gowns and others that are so heavy in texture, that they would not come under the heading of "sheer" at all except for the fact that they are translucent.

Printed silks are also in order for evening and we have printed voiles that are really works of art, so airy and delicate are they in texture and so beautifully appropriate in their dainty colorings and designs.

Besides being used for every type of outer garment, prints are much in vogue for lingerie. Engaging designs have been printed on radium in delicate pastel tints which blend with their subtly colored grounds. These printed silks are so lovely that they require little or no trimming and are most appropriate for the tailored undergarment, which is a definite outgrowth of our modern age.

The old saying that clothes do not make the man (or the woman, in this case) may be true, but our clothes certainly tell what type of person we are, for they are the outward expression of our personalities.

Everyone is cooperating with the woman of today that she may be well dressed, and she does not have to spend a great deal of money to achieve the effect. Most of the styles from which she has to choose first preen themselves at the fashionable watering places, where beauty and elegance congregate and style is born. The fashions worn at the Lido and Biarritz affect those at Palm Beach and Palm Beach in turn influences the mode at Southampton. From the resorts the accepted fashions are adopted and adapted by the couturiers, featured in the fashion magazines and finally reach the great public through the department store. The stores and fashion publications meet the woman more than half-way, furnishing her with style information and a wide variety of fashion-correct merchandise from which to choose. All that she has to do, is to exercise a little discriminating judgment and restraint.

Research Findings

By E. F. KOHMAN*
National Canners' Association Laboratories

OUR major researches with fruits have been along two lines. Offhand, these two major lines might seem as distantly related as two subjects could be imagined to be, since they deal respectively with nutrition and metallurgy. However, it happens that the two subjects have so much in common that it is entirely logical that one individual is engaged in the study of both. To be more specific, the two lines of study are the causes of vitamin destruction during cooking and canning and the corrosion of tinplate.

As some of you already know, oxygen is of vital importance in a study of the preservation of vitamins. As more of you know, oxygen is a decided factor in the corrosion of cans both inside and outside. In neither case are we entitled to limit our interests to plain simple elementary oxygen, however. In such complex products as fruits, there are various and sundry compounds containing oxygen which possess many of the properties of oxygen. The properties and reactions of these compounds containing oxygen are more subtle and less understood than oxygen itself, and it is in connection with these that we are finding our problems with fruits vastly more complicated than would be the case if we had only to deal with the simple element, oxygen.

The sports frock of the present day

You are more interested in concrete facts, however, than in generalities. A brief summary of our work on vitamins in canned fruits is, therefore, in place. Our first work was with canned apples, not because apples are outstanding in the amount of vitamins that they contain, but because in our perforation work we found them to be a convenient vehicle to study the vitamin problem. It was found that if apples are canned without any preliminary treatment such as a housewife would use, or if apples are made into apple sauce or baked, the vitamin C was practically all destroyed. If, however, the apples are submerged in a salt solution for sufficient time to enable them, by the activity of their respiratory process, to consume the oxygen within their tissues, they can then be canned without any loss in vitamin C, even though the process is extended to three times that necessary for sterilization. It was further found that apples from the same lot held in cold storage from October to March had lost approximately half of their vitamin C content, while the canned apples eight months after canning were still equivalent to the raw apples in October eight months earlier. This demonstrated in a definite and concrete manner the role that oxygen plays in vitamin C destruction and has been a valuable guide in our subsequent studies.

ALTHOUGH for culinary purposes tomatoes are commonly regarded as a vegetable, they are botanically and nutritionally a fruit. During the past year we have made a preliminary study of the concentration of tomato products. Since they are initially outstandingly high in each of the three vitamins, A, B and C, it would be expected that upon concentration, a product very potent in these vitamins would be obtained if no loss occurrs during the concentration. Briefly, in our work we found that there was no apparent loss in vitamins A and B during the concentration, but some loss in vitamin C. This loss was not in the same proportion, however, as the concentration. Consequently, the tomato pulp was somewhat more highly endowed with

(Continued on page 70)

*Extract from an address delivered before the Fruit Section of the National Canners' Association Convention in Chicago.

Technology in the Bread Industry

By E. B. NICOLAIT
Manager, Production Service Dept. Quality Bakers of America

BREAD making is no longer purely a domestic art.

The baker has declared for the American housewife her independence of the drudgery connected with bread making, and the kneading board,, like the spinning wheel, has been relegated to the attic.

It is not the beauty parlor trend that has brought about the change, nor the woman's feeling that she owes her time to her family for more important tasks. It is because she frankly recognizes the superiority of commercially baked bread in quality and uniformity.

Bread making today is in fact an industrial science. It has made more forward strides in the last fifteen years than it did in the one-hundred years previous to that time. That progress does not apply to the mechanical means alone that have been developed and so perfected as to make it unnecessary to have the raw material or product touched by the hands of the baker at any stage of process work. It applies also to the men who make up that noble vocation of baking.

THE old type of craftsman is rapidly becoming extinct. The old Master of the bench and oven who spent the greater part of his life gathering practical experience as apprentice and journeyman baker, who had to develop a sort of sixth sense to know how to meet the ever changing conditions of his flour and other raw materials, so as to produce the same good bread day in and day out, finds himself outclassed by the modern young bakery engineer.

Here is the Master of forty—sturdy but worn from heavy toil and hard bought experience—and on the other side is the man of twenty-five, the modern baker. The twenty-two years' experience of the one fall far short in value of the eight or five years of the other, even with the same start in natural fitness, because in the case of the younger man, technology has more than made up for the difference in years.

Visualizing these two men you have a fair picture of the baking industry as it was and as it is today, and the effect of the practical application of science upon bread making during the last fifteen years.

As all food industries have advanced, each has contributed to the progress of the baking industry. The dairy industry is an example of scientific progress and its proportionate contribution to scientific baking. Most cakes always contained a goodly quantity of milk but up until a few years ago bread was made with milk where it was cheap and obtainable fresh daily. Today milk is used by all the large baking concerns in the United States, and we use it in all the plants of the Quality Bakers of America, in quantity sufficient to comply with the Government Standard of "Milk Bread" although very few bakers are capitalizing on the fact that milk is one of their bread ingredients and that it makes bread an even more nourishing food.

MILK is used in bread not only in dairy sections such as up-state New York, Michigan or Wisconsin, but it is used in sections where fresh milk is scarce and high in price, as in Miami, Fla., for the reason that science has made it possible to reduce milk to either the dry or condensed state without impairing its nutritive value. It is then not merely far less perishable but being condensed while it is fresh, right in the neighborhood of the farms, it is so uniform that it no longer presents serious problems in fermentation control to the modern baker.

In order to realize the scientific progress that has been made in the bread industry, let us look at a plant in an average American community. A plant which is representative of modern ideas of bread making. I am thinking of a plant in a town of about 25,000 population, with a trading population, within a radius of fifty miles, of about 70,000 people. The owner is a member of a cooperative group of wholesale bakers who are not in competition with one another. They not only have a membership pledge but also live up to it. The plants in this group are always open for inspection; in fact, a practice is made of inviting the public in to see the process of bread making. A change to more modern equipment, an addition to the plant in either a new oven or enlarging of space, is always taken advantage of and "open house" is held. This is the present day baker's way of gaining the housewife's confidence. He has nothing to conceal and some mighty interesting things to show her.

In the plant referred to in a recent open house, over eight thousand visitors went through the plant during three evenings.

EDUCATORS in particular take a keen interest in modern bread making. A teacher of domestic science who visited this plant may be considered representative of the intelligent type of visitors. Here is what she saw. First, the flour storage room—spacious, light and airy, white enameled walls, flour on skids to allow even temperature and free circulation of air around every sack. Then, the flour blending equipment adjustable to any desired proportion of the various brands of flour. The flour she saw is of well-known flour mills, the kind she would use herself. The Superintendent of Production at this bakery explained to her what a world of difference there is in flours and that even though flours are milled to comply with analytical standards, there is a difference between them which the scientist is not yet able to explain and which only a practical baking test will reveal.

What are these differences? In the enzymes, for example. We know of a number of them and can determine their strength but no one ever isolated one. "Are they something like vitamines?" the domestic science teacher asks. "Yes," she was told. "They are a similar phenomena—although to us bakers they mean more since they affect results influencing fermentation, thereby making it difficult for us to control results."

The domestic science teacher being principally interested in nutrition, wants to know whether they are as important as vitamines so far as their nutritional value is concerned and "is white bread devoid of vitamines?" She was told that enzymes insofar as effect upon nutrition is concerned, are of no consequences. There is no doubt about vitamines being in bread, and of definite nutritional value. White flours of the finer patent grades are not as potent in vitamines as coarse flours but there are more vitamines to an ounce of yeast or a pound of milk than to a barrel of whole wheat flour, and, as you see in the material room, we are using plenty of both.

THE bally-hoo of the food faddist is dying out. His theories are drying up in the sunshine of facts. As bakers, we would just as gladly make coarse bread if the public demands it.

Our domestic science teacher knows how to ask questions. "Why is your scientific research being concentrated on such factors in flour affecting fermentation and process work. Are you not now able to control it?" The young production superintendent, college trained, was quick to answer. "We are, to the extent where the layman would not know the difference. Look at this fermenting or dough room,

for instance. Doughs ferment apparently alike. So far as can be observed, the fermentation in this room, through controlled temperature and humidity, is really controllable. The finished product to the layman is so uniform that it would be hard to pick the best loaf. The average consumer notices no difference but the trained eye of a baker can discern flaws and points below standard. This bakery sends its bread in to New York regularly for examination and scoring. The cooperative organization, of which it is a member, maintains a large staff of specialists in each phase of bakery operation and management. Through these specialists member plants are kept posted on the newest developments in the industry. They conduct research and investigations and foster such ideas and projects that simplify production and improve the uniformity of high quality bread.

"The superintendents of production at these bakeries meet in conference not less than once a year."

"AN organization of Production Superintendents was recently formed at one of these conferences, The main purpose of this organization is to educate its shop forces and to train them, through a series of educational Subject Matter, which is made up by a Committee, and covers technical phases of the baking industry, in addition to the practical training they get in the shop.

"They hold weekly meetings at the plants and report the proceedings to the secretary of the organization so that points of interest to other shop superintendents are broadcast. Membership in this organization inspires men to take more interest in their work, to do it more intelligently and willingly. It all results in better bread and bakers of high calibre.

"Here's a copy of a scoring report on bread we submitted for examination. As a member of the Quality Bakers of America, we take part in a contest conducted among the plants on bread quality. The loaf scoring the highest during the month wins a large silver trophy. Honorable mention is awarded to the next four best scoring loaves.

"There are ten pointers on which samples are scored and you see that the deductions from the standard of one-hundred are explained on each score. In connection with the bread that is sent in for scoring, complete formula and process data is submitted. The report we receive on the bread usually gives suggestions for the improvement of our product."

By that time our domestic science teacher was in the mixing room. A so-called five-barrel mixer started to pound a one-thousand dough at 65 revolutions per minute, driven by a 50 H. P. motor. Its purpose was explained to her as not only developing whatever good there is in the glutenous parts of the flour so as to produce bread which will retain freshness for a long time, but also to produce that whiteness, upon which many people insist. The action of the high speed mixer is similar to that of whipping the white of egg.

SHE next saw the dough sent by gravity through a spic and span chute to the dividing machine, where it was cut into equal parts and dropped into a rounding or kneading machine. From there these loaves were conveyed to the overhead proofer, in which every loaf is given an equal length of time to proof so that as it slides into the moulding machine, it is easily shaped and dropped into the pan.

She saw the bread moved next into a large proofing cabinet where temperature and humidity were under control. She then saw it placed on the trays of a conveying type of oven. This is a monster affair, tile covered, illuminated inside in every part. Through the windows inside of this oven she followed the process of baking of the bread from where it slowly expanded to where it turned golden brown and came out a thoroughly and evenly baked chestnut brown loaf of rich, appetizing flavor.

Then she saw racks of bread cooling, waiting for the wrapping machine to seal them in waxed, almost air-tight wrappers. Whence, in a few hours they would be carried to the grocery store and soon be on the table of the consumer.

The superintendent of this plant is also a member of the American Society of Bakery Engineers, an organization fostering scientific baking and making fast strides in introducing science in the manufacture of what has been considered since biblical times, the Staff of Life.

NOVEMBER CONTEST

REPRESENTING

MEMBER QUALITY BAKERS OF AMERICA By Invitation Only

THE MARK OF QUALITY ON WRAPPER OF EVERY LOAF

BREAD SCORING REPORT

from

BAKERS SERVICE BUREAU, INC.

469 FIFTH AVENUE, NEW YORK, N. Y.

NEW LIFE (Brand) BREAD RECEIVED FROM STORCK BAKING COMPANY (Plant)

Parkersburg, W. Va. (City) ON Saturday November 19th (Day) (Date) 19 27

SHIPPED Thursday, Nov. 17th (Day) (Date) WEIGHT NET 16.9 OZS. 2 DAYS AFTER BAKING

IDENTIFICATION NO. 1521 PLANT CODE NO. 20 MEASURED 8½x3 BY BS

REMARKS Plain top

	STANDARD	POINTS BELOW STANDARD	SCORE
GENERAL APPEARANCE	100	SHAPE ... BAKE uneven 2 ... RUGGED BREAK ...	
		TOP CRUST ... SOILED ... *1	98
BLOOM	100	BOTTOM ... SIDES ... ENDS ...	
		ALL AROUND 2 ... *2	98
KEEPING QUALITY	100	STALING ... MILDEW ...	
		... *3	100
CRUST	100	BLISTERED 1 ... LACK TENDERNESS ...	
		... *4	99
VOLUME	100	(4 CC TO EVERY GRAM) 128 CC 2380 GR 480	
		... *5	100
EXTERIOR SCORE	100	. . . . . 99.0	
CRUMB COLOR	100	DULL ... GRAYISH in x cut 2 ... WATERMARKED ...	
		UNEVEN 1 ... STREAKY ... *6	97
CRUMB FIRMNESS	100	LOOSE ... WEAK CELL ... OPEN CELL ...	
		UNEVEN 1 ... *7	99
TEXTURE	100	DULL ... COARSE pin-headed cell structure in x cut 2	
		UNEVEN Moulding hole near top 4 ... *8	94
AROMA	100	NEUTRAL ...	
		... *9	99
TASTE	100	DRY ... GUMMY ... NEUTRAL ...	
		ACIDY ... *10	99
INTERIOR SCORE	100	. . . . . 97.°	
TOTAL SCORE	100	. . . . .	98.3

REMARKS

(SEE OVER)

BY E. S. Woodcock
Production Service Dept.

DO GREAT CHEFS know what's what in Gas Ranges?

Wide warming shelf

All of Smoothtop is cooking surface . . .

4 kettles can cook on 1 burner . . . . . .

Pilot light . . . . . .

3 heats — boil, simmer, warm . . . . . .

Cooking chart . . . .

Convenient height — 38" from floor . . . .

Oven-heat control

Well-designed separate broiler . . . . . .

Even heat throughout large oven . . . . . .

Strong-hinged oven doors act as loading shelves . . . . . .

ASK THEM . . . Diat of the Ritz! Maxime of the Benjamin Franklin! Godard of Pierre's! Great chefs . . . making famous dishes for famous people! They cook *scientifically.*

Each uses a broad, flat "coal-top" range, because it simplifies top-cooking.

That is why *they endorse* the famous Smoothtop Gas Range —the exact household duplicate of the range used by 80% of the leading chefs and made by the same maker.

A quick boil . . . then just a gentle push slides the heaviest pots back to the simmering zones. Others take their places! Why . . . four pots can work around one burner on a Smoothtop!

Automatic heat control, rust-resistant oven, built-in cooking chart and spacious *separate* broiler . . . every tool of modern scientific cooking! Smoothtop is approved by Good Housekeeping and Herald-Tribune Institutes, as well as Delineator and Modern Priscilla . . . naturally!

Any leading gas company will show you the smart console lines. Or write for special booklet showing domestic science model OD 1450. Standard Gas Equipment Corp., 18 E. 41 St., New York City. *Pacific Coast Distributor: Northwest Gas & Electric Equipment Co., Portland, San Francisco, Los Angeles.*

A STANDARD OF STANDARD GAS EQUIPMENT CORPORATION

Smoothtop
REG. U.S. PAT. OFF.
GAS RANGES

Home Economics Women in Business

By MARJORIE M. HESELTINE
Director, Home Economics Service, Hills Brothers

AT the annual meeting of the American Home Economics Association in 1921, a group of 17 women asked and received permission from the association council to form a Home Economics in Business Committee. In six years the membership of this committee (which has since become a full-fledged section of the association) has increased to 217, a rate of growth which probably represents fairly the development of this vocational opportunity for the Home Economics trained woman. Our section files show that these 217 members are engaged in 46 types of work and that the commodities which they represent begin with aluminum (alphabetically speaking) and end with yeast.

In the larger and longer established commercial Home Economics departments, there may be a high degree of specialization; one member of the staff may operate the test kitchen; a second prepare the bulletins; a third act as the field representative. The large and diversified department is the exception, however. In our attempts to serve simultaneously the best interests of our producer employers and our consumer patrons, most of us are "jills-of-many-trades." We nearly all give more or less time to that work which might be dignified by the term "research" but which I prefer to call "finding the facts." By facts, I mean that body of data which expresses the most enlightened information available on a given subject at a given time. I should like to emphasize the time factor. If some of the hoary ideas on foods which still circulate, (and alas still find their way into advertising copy) could only be labeled "as of 1875," how much simpler the task of adviser would be.

In attempting a brief exposition of the methods which Home Economics women in business follow in securing the groundwork of facts upon which the activities of their departments are based, I shall draw my illustrations almost entirely from the field of foods because it is the only branch with which I have had first-hand acquaintance.

As the average Home Economics woman who enters business has spent at least four years in more or less specialized college training and thereafter has added a few cubits to her stature from experience in teaching, extension work or other positions, she might be expected to be reasonably familiar with aluminum or yeast when she enters the front door to take the job. And I think there is little doubt that from our general knowledge of foods (or textiles or equipment, as the case may be) we have something to offer from the outset to our associates in the company. But most of our contacts are to be with others who also know more about these products (from certain angles) than the manufacturer. I refer of course to the consumer and to the educator of the consumer. I question seriously that many of us would feel competent during our first month on the job to talk intelligently about our new products before a group of experienced housewives and certainly not before a jury of our peers — our former teaching colleagues. We must serve an apprenticeship on the job before we can qualify as a specialist on self-rising flour or enamel ware. I m sure I don't know when we may be considered worthy of that title which the newspapers will thrust upon us — "Home Economics Expert."

AND there is much to be learned during that period of apprenticeship. Fortunately there is a fairly generous amount of information on most products to be had for the reading, or the listening. It was a revelation to me to find how many bits of immediate practical value could be picked up by observation and conversation with the chemists and foremen at the factory. An avalanche of trade journals whose very existence I had never even suspected, has proved a second source of enlightenment. I have had many occasions to be grateful to the office librarian for sending marked copies of unprepossessing publications to my desk.

Then there is the small stream of scientific literature and the flood of pseudo-scientific publications. In our college courses, we have been schooled to distinguish the false nutritional gods from the true. Somehow, we seem to think that this ability to discriminate is a part of our general intelligence rather than the outcome of limited and intensive training. We are deeply shocked when our unquestionably intelligent business associates quote the statements of the food faddist Black and of our revered Professor White in the same breath. I wonder if we would do a better piece of work in passing on the merits of two books on merchandising, say, or personnel management. Many popular health idols are neither hampered by doubts nor hesitant to make statements about individual foodstuffs in non-technical language which appeals to the layman. It is only to be expected that their dogmatic pronouncements should be credited, especially when they express a high regard for the product of the manufacturer. An understanding of the reasons for the strongly intrenched positions of these pseudo-scientists by no means implies resignation at leaving them in power. We are profiting but little from our associations with expert salesmen, if we cannot use their tactics to replace these self-styled or "private label" authorities whose inferior goods have been carried on the company's mental shelf with our own wisely chosen selection from the best "nationally advertised" scientists.

THE volume of information unearthed by delving into the sources already mentioned (the experience of the manufacturer, the technical journals, and the writings of reputable scientists) may be sufficient to warrant the publication of a bulletin presenting the known facts in convenient and readable form. This may easily be true if we are dealing with a food product of major importance from the standpoint of either nutrition or agricultural economics of milk or meat, for example. It is not unusual to find some excellent material in a state experimental station bulletin of small circulation and to reprint the findings in full or to incorporate them in a pamphlet which will be given wide distribution. Regardless of the amount of existing information piled up in an investigation of this kind, however, the chances are that some big gaps in the present knowledge of the product have been revealed and the need for specific pieces of research suggested. This is almost certain to be true of products of minor dietary importance and of proprietary products.

That branch of fact-finding which may be legitimately called research is carried on through a number of channels. The Evaporated Milk Association, The Certo Corporation, The American Stove Company and Sears-Roebuck are among the organizations which employ a Home Economics woman for full-time research work. Although the testing of recipes in itself does not constitute research, many of the food companies which maintain test kitchens use them to solve problems of experimental cookery. In the beautiful gray and green kitchen of the American Stove Company in Cleveland, for example, there has recently been completed the most intensive study, of oven canning ever attempted.

While a few Home Economics Women in Business are full-time research workers, and others give part of their time to investigation, the majority act in a "promotional" capacity toward research. If her company is sufficiently large to maintain a research laboratory,

(Continued on page 80)

The Truth About Margarine (Oleomargarine)

A Word to Teachers of Domestic Science and Home Economics

Margarine is a delicious and wholesome food:

This is the unanimous opinion of the foremost nutrition experts of the world.

Margarine makes bread, rolls, biscuits, hot cakes and baked potatoes more appetizing.

Margarine is completely satisfying as a shortening for pies and cakes.

Margarine is delightfully enriching as a flavoring ingredient for cooked dishes.

Margarine is inexpensive, too.

There are two kinds, and only two kinds of Margarine (Oleomargarine): One, made of the best meat fats and vegetable oils, milk and salt. The other, usually called Nut Margarine, made of the purest vegetable oils, salt and milk. Milk gives Margarine much of its pleasant, sweet flavor.

Do You Have all the Facts?

As the world's largest producers and distributors of Margarine and other desirable fat foods are members of this Institute, exceptional research facilities are available should you care to consult us concerning the food value and use of these products.

Also on request, and free of charge, The Institute of Margarine Manufacturers, Munsey Building, Washington, D. C., will mail you any or all of these Educational Bulletins in quantities to meet your requirements:

No. 8—Margarine Laws of Oregon and Washington Repealed by a Referendum Vote of the people November 4, 1924.

No. 9—"Opinions of Educators and Statesmen on Margarine and Margarine Legislation."

No. 10—"The Composition and Food Value of Margarine."

No. 11—The Economics of Vitamines.

No. 12—False Advertising.

Name ..... School .....

City ..... State .....

Institute of Margarine Manufacturers, Munsey Building, Washington, D. C.

How We Use Material Sent by Manufacturers

Showing How One Home Economics Teacher Makes Good Use of Samples and Educational Advertising Material

By HELEN RAYMOND
Mcorestown High School, Moorestown, New Jersey

HAVING come from a family, always asked to "try out" the new things by the neighborhood grocer, we hail with joy the new foods and devices sent us by the manufacturers. We try them all from soaps to salad oil. Really as soon as we receive a new product, or for that matter, an old and tried friend, we have an overwhelming desire to try it out. Being in a small system where one teacher does all of the work and planning, there is almost always one class into whose scheme of things it can be worked. For example, instead of each person making plain muffins, we make muffins of various sorts. (The principle is the same), wheatena, cream of wheat bran, grapenuts, cream of rice, cornmeal. "Why I never knew there were so many kinds," says one. And of course the child goes home to try them one and all on the family. One little girl said to me, "We never have cream of wheat for breakfast. We always have oatmeal." Well and good. Never try to change a good food habit is our motto. But how about the muffins or cookies or a pudding to use the little sample that has been sent home to be tried by the child in her own kitchen and a short report on the result made.

We use one type of scouring powder for awhile, one soap, one abrasive,—then change, as different firms cooperate with us, to make it possible. So by the time June arrives, every child has had the opportunity to use several types and decide for herself her favorite brand.

We are blessed with plenty of display space; large posters are a source of great pleasure and profit, especially if they are attractive in color. We run two display boards—one of things of general, current interest as food and other exhibits in the neighboring cities, what is happening in the world at large that may be of interest — and such things as general health hints along the line of Home Economics subjects. The other bulletin board is devoted to the main topics of the work on hand. These, too, are often pictorial — clippings from magazines and newspapers and posters and pictures sent by business firms. During the bread and biscuit making season the display has consisted of two large posters showing in detail two different methods of procedure and various wellmounted pictures with types of bread and possible variations, a booklet or two on the history of bread and one which the housekeeper may obtain on bread-making.

Booklets we have of every description. One copy of each is filed for future reference in our cabinet, the others are used as texts. Our own text-book is old and usually I find that one or another of the booklets has the material summed up according to the latest information on the subject. So it is given out to become the child's own property. It has been interesting to note how this has stimulated interest to the point of having a child write to the manufacturers of similar products. So the child's world is broadened by the contacts that he makes.

This stimulates interest in the various brands carried at the grocer's. We try to be very fair to the manufacturer cooperating with us. We emphasize the "Brand" name of all the products that we are using through the courtesy of the maker, but never use a product that we cannot believe in the merit of from the viewpoint of health.

Will the cooking fat used in your cookery classes meet these tests?

Is it suitable for every cooking purpose — for frying as well as shortening?

Will it stay sweet and fresh without refrigeration?

Can it be used over and over again for frying, simply by straining through clean cheesecloth?

Is it packed in cans of convenient size?

Crisco, the pure vegetable shortening and cooking fat, has each of these desirable features. You will find it particularly well suited for use in your Cooking Classes.

We have prepared a "Manual of Cookery" a booklet whose 12 chapters are filled with a great variety of tested recipes calling for the use of Crisco. A sample copy is yours for the asking. Write for it.

Procter & Gamble Co.
Department V-328
Cincinnati, O.

Please send me, without cost, a sample copy of the "Manual of Cookery."

Name .....
Street .....
City .....State .....

Safe for Children

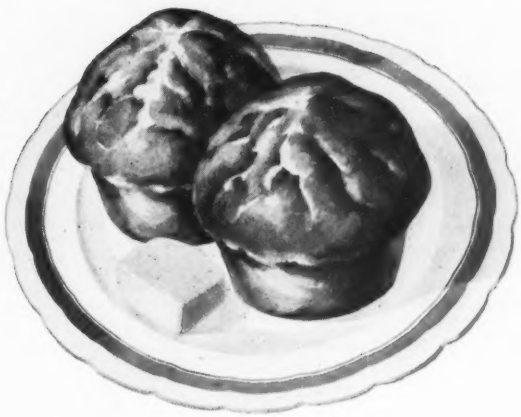
KŌ-PA, a tempting combination of nature's whole grains, sun-dried figs and plump raisins, has a flavor which suggests coffee and satisfies. It stimulates nothing but the appetite and leaves no caffeine dullness. It's the hot beverage you can give children . . . aplenty and safely. It pleases every taste and enables you to quit coffee without a single regret. Order of your grocer—today.

"You'll Like It Better"

THE KŌ-PA CORPORATION
Chicago, Ill. Fort Worth, Texas

TO READERS OF THE HOME ECONOMIST: Please write Miss Anita Courtney, KO-PA Corporation, 326 W. Madison St., Chicago, Ill., for libera! sample of delicious KO-PA, giving her your name and address and name of your retail grocer.

Kellogg's ALL-BRAN *Muffins*



OF ALL hot breads, ALL-BRAN muffins are the most popular. They are *delicious*. They are *nutritious*. They are easy to make. Have you tried our recipe?

Kellogg's ALL-BRAN *Muffins*

2 tablespoons shortening
¼ cup sugar
1 egg
1 cup sour milk
1 cup Kellogg's ALL-BRAN
1 cup flour
½ teaspoon soda
¼ teaspoon salt
1 teaspoon baking powder

Cream shortening and sugar together, add the egg. Mix and sift flour, soda, salt and baking powder. To the creamed mixture add the ALL-BRAN, then the milk, alternately with the sifted dry ingredients. Pour into greased muffin tins and bake in a moderate oven (370° F.) for twenty minutes.

If sweet milk is used instead of sour milk, omit the ½ teaspoon of soda and use 3 teaspoons baking powder. Raisins or dates may be added to the muffins if desired.

A wholesome combination is Kellogg's ALL-BRAN Muffins and Kaffee Hag—a real coffee—minus the caffeine—a coffee that lets you sleep.

Send for our recipes.

Kellogg's
ALL-BRAN

The original all-bran—ready to eat—ready to use in cooking

KELLOGG COMPANY HE-3
Home Economics Department, Battle Creek, Mich.
Please send me a set of Kellogg's recipe cards.
Name
Address

The Sewing Machine—Its Use and Care

(Continued from page 59)

where there is any friction. Always use a high grade oil. It is best to be safe and purchase oil from a sewing machine manufacturer especially prepared for sewing machines. Keep a small piece of cheese cloth and fine brush in your machine and always remove dust, lint and threads before oiling any part of the machine, especially in and around the bobbin case. Do not put oil in the motor, but a special lubricant that is prepared for sewing machine motors.

A machine should not be left near an open window. There is danger of sun or dampness damaging the woodwork, and dust collecting around the working parts. When putting your machine away, leave a piece of material under the presser foot and lower the presser bar. This will prevent threads locking in the bobbin case, or any damage to the feed, if for any reason the machine may be run with the head down. Care should be used when oiling the machine not to get oil on the rubber ring of the bobbin winder. Oil causes rubber to stretch and slip on the balance wheel. Most all machine trouble can be avoided if the machine is properly cared for, threaded correctly, and the right needle used. Always get the best needles made especially for your particular make of machine. A needle may be blunted when going over thick seams, or from striking pins left in material when basting. Examine the needle often for a blunt or bent needle, which will cause the machine to skip stitches and pick up threads in the material. The proper size needle and thread for materials to be sewn insures best results. An easy rule to remember is to use coarse needle and thread for heavy material and fine needle and thread for fine material.

To get the best results from your machine and save time in its use, be familiar with the instruction book furnished with it. Some makers also furnish valuable booklets showing how to do dainty finishing touches required by the fashions of today. One of the best of these we have recently seen is "Short Cuts to Home Sewing," published by the Singer Sewing Machine Company for free distribution to women who sew, regardless of the machine you may have. This company also publishes valuable charts, text books and pupils' manuals for teachers of sewing. These may be obtained without charge by writing Educational Department, Singer Sewing Machine Company, Singer Building, New York.

Here is the meaning of "homogenization"

When Carnation Milk is used for cooking, whether in homes or in hotels or restaurants, *better results* are obtained because the milk is "homogenized."

When Carnation Milk is used in infant feeding, *easier digestibility* is assured because the milk is "homogenized."

When Carnation Milk is used in commercial ice-cream or candy making, *superior quality* results because the milk is "homogenized."

What *is* "homogenization"?

It is a process which breaks up the fat globules in Carnation Milk into minute particles and distributes them evenly throughout the milk. It gives **every drop** a full share of the double helping of cream which results from the evaporation of rich whole milk to double richness.

The butter fat does not separate out. And it is very fine grained.

So, all foods made with this milk are exceptionally smooth and fine in texture. Ice crystals give less trouble in ice-cream making; sugar crystals less in candy making.

In infant feeding the advantage is that a very fine soft curd is formed. So Carnation is easier to digest than boiled or pasteurized milk.

That explains what "homogenization" is and why it is important. But it leaves many other advantages of Carnation Milk still to be pointed out.

Some of these advantages — among which are economy and convenience — may be important to you. Ask us to tell you more about them.

The tall can, diluted, makes an overflowing quart of pure, rich milk

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365 Carnation Bldg., Oconomowoc, Wis.
465 Stuart Bldg., Seattle, Wash.
New York - Aylmer, Ont.

Carnation MILK

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"From Contented Cows"

Research Findings

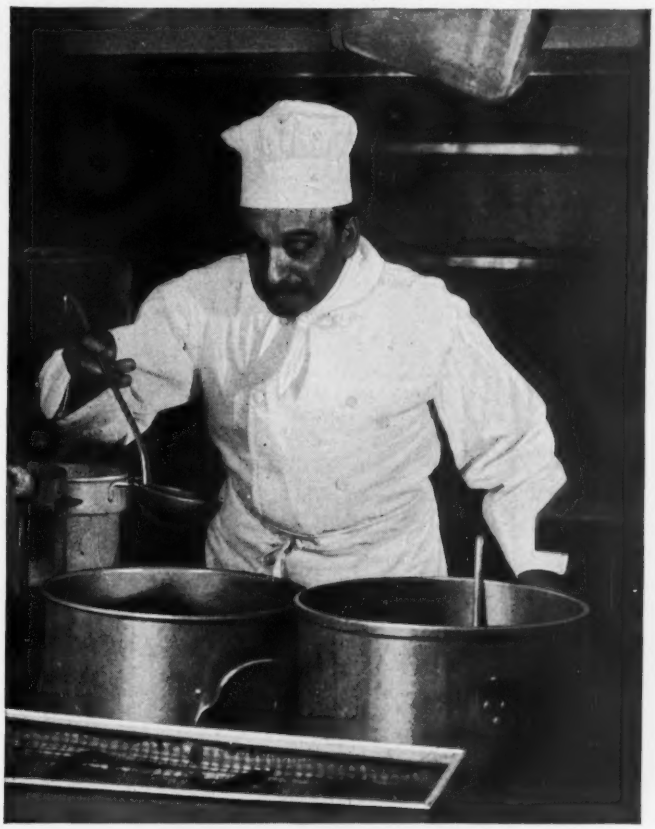
(Continued from page 62)

vitamin C than raw tomatoes and several times as high in vitamins A and B as raw tomatoes.

During the past year we have completed a series of studies with strawberries. These were canned in Oregon in 1926 and fed over a period of 14 to 18 months after canning. These canned strawberries were found to be the equivalent in vitamin content to raw strawberries purchased daily in the New York market and fed during the strawberry season. Another interesting result of this strawberry work is that strawberries were found to be the equivalent of such products as oranges and tomatoes in vitamin C content. This is of particular interest since there were hitherto few data available

(Continued on page 76)

The BEST COOKS *use* Aluminum



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"The most satisfactory ware I have ever used . . . lasts indefinitely . . . easy to keep clean and sanitary"—so says the chef of this great hotel. Many other exclusive users of aluminum—hotels, hospitals, and other noted institutions—share that opinion of experience.

To the housewife, the greatest buyer of kitchen ware, such expert evidence is most valuable. This wonderful "modern metal," so economically durable, so easy to keep shining clean, cooking everything so well—what can match its usefulness for the *foundation equipment* of efficient home kitchens?

The best cooks use aluminum.

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Please send booklet, "The Precious Metal of the Kitchen," to address written below:

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for use of
Home Economics Teachers

Below are listed booklets and other helps to home economics teachers. Send your request direct to the manufacturer, being sure to ask for material mentioned in THE HOME ECONOMIST.

Teacher's Outline for a Domestic Science Course

A series of interesting bulletins with lesson plans.

R. B. Davis Baking Powder Co.
38 Jackson Street, Hoboken, N. J.

Milk to Drink

Formulae for tempting milk and fruit juice drinks which appeal particularly to children and help them take all the milk they should have.

Pet Milk Company
Arcade Building St. Louis, Mo.

Sunkist Domestic Science Bulletins

A series of monthly lesson leaflets furnished in quantity for class distribution during eight months of school year, to home economics classes. Fruit recipes.
A School Lunch Bulletin and diet booklet, "Telling Fortunes with Foods" will also be sent.

Dept. H. E., California Fruit Growers Exchange, Box 530, Station C.,
Los Angeles, California

Nutrition and Health — Child Health

Fifth Edition of "Nutrition and Health." This new, enlarged edition contains all of the former important material, with the addition of valuable scientific information.
"Child Health," handbook for mothers is also available to the teaching profession.

The Borden Company
350 Borden Building 350 Madison Ave.
New York, N. Y.

"The Art of Making Bread"

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Northwestern Yeast Co.,
1750 North Ashland Avenue
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A Catalogue of Special Diet Foods and Equipment

A booklet listing foods and equipment adaptable to the diabetic or obesity diet. Helpful to dietetics instructors offering diet in disease to college students.

The Chicago Dietetic Supply House,
1748 West Van Buren St.,
Chicago, Ill.

Oleomargarine, Its Purity, Wholesomeness and Economic Importance

Valuable information concerning the production, food value and economic value of oleomargarine. Prepared by our research department.

Institute of Margarine Manufacturers
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"Sunland Cookery"

A monthly bulletin devoted to dried fruit cookery with historical data, laboratory research, and recipes. Sunland Cookery Club Recipe Book, for girls of grammar and junior high school. The Story of Dried Fruits, with 80 recipes.

Sunland Sales Cooperative Association,
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"Food Value of the Banana"

A 24-page booklet, with cover in five colors, presenting this subject in text and tables, on authority of leading dietitians.

United Fruit Company
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468 Fourth Ave. New York

Book Reviews

"Population Problems in the United States and Canada." Edited by Louis I. Dublin. New York. Houghton Mifflin Company, for The Pollak Foundation for Economic Research, 1926. Pp. XI, 318, $4.00.

COMPOSED of the contributions of nineteen different writers this book is the outgrowth of a number of papers presented at the December, 1924 meetings of the American Statistical Association. "With all its open spaces, America has a particularly interesting and perplexing population problem which insistently bids for attention. The unparalleled growth in numbers, the intermixture of races, the rapid depletion of natural resources, the declining fertility in the cities, the urban migration, and the more recent curtailment of immigration, all make America a remarkable laboratory for the study of population."

Dr. Dublin, the editor, prepared the introductory chapter. Part I which discusses the role of the statistician in dealing with the population problem. Part II considers the population growth of the United States, the natural increase of the population, and the urbanization of the population. Part III, dealing with natural resources, considers especially the agricultural and mineral resources of the country. Immigration and its effects upon population is discussed in Part IV. Part V, treating population and labor supply, contains an especially interesting section on the "Effect of the Employment of Women on Population." The final section of the book examines the probable effects of the health movement and of family allowance systems and concludes with the consideration of a possible future equilibrium.

"Profits." By William Trufant Foster and Waddill Catchings. New York. Houghton Mifflin Company, for the Pollak Foundation for Economic Research, 1925. Pp. XXII, 465. $2.00.

"Business Without a Buyer." By William Trufant Foster and Waddill Catchings. New York. Houghton Mifflin Company, for The Pollak Foundation for Economic Research, 1927. Pp. XX, 205. $2.00

"The Road To Plenty." By William Trufant Foster and Waddill Catchings. New York. Houghton Mifflin Company, for The Pollak Foundation for Economic Research, 1928. Pp. 231. $2.00.

IN "Profits" the authors attempt to demonstrate three propositions, first that consumers are not able to obtain enough money, year in and year out, to buy goods as rapidly as they are produced, second, that "the present

(Continued on page 76)

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Strange Foods of Other Lands

(Continued from page 54)

ture. It is prepared for food by first cutting off the wings, and then passing the body through the fire to remove the fur, and with it the strong foxy smell with which it is impregnated. It is then carefully scraped, split open and grilled on the embers spatchcock fashion, when it is ready for the table, and is "fine eating," we are assured by those affecting it, having a rich, gamey flavor, somewhat like that of a hare.

But in such dissimilar things as edible odds and ends the most unlooked-for occurrence is often come across. Perhaps among the most singular of these is that connected with the use of the white ant as a food. Eaten in many parts of the East Indies and in various parts of Central and South America, not only by the poor but by the rich, the white ant is prepared in much the same way as obtains in different parts of Africa, where the ant and the wasp form a staple supply of food to the natives. The method of collecting and cooking them is to skim off with calabashes the insects that at time of swarming or migration fall into the water; then they are parched by a slow fire in an iron pot, and frequently stirred as in roasting coffee-beans. In this dried state the white ant is looked upon as a most delicious food; and, strangely enough, when pounded and made into a paste, this queer edible has an exceedingly close resemblance, both in flavor and substance, to that very toothsome morsel marzipan. More than once travelers have declared that they have never tasted anything so delicious.

MANY foods unfamiliar to native Americans are consumed in the foreign colonies of our cities, most unusual dishes, appetizing and otherwise, such as ripened eggs, canned braised earthworms, and ducks' gizzards dried to horny hardness. These of course would hardly tempt our native appetite. Water-lily bulbs sound more attractive, but they are described as heavy tubers like dingy-hued fat bananas growing end to end in chains a yard long, and we are assured that when they are cooked only the Oriental palate has thus far been able to appreciate them.

But, turning from lily to rose, we learn that Chinese rose-flower marmalade is delicious, and that when a container of it is opened a whole room is suffused with the perfume of roses. Roses too lend a part of their charm to the Turkish confection zujak, a delicacy of which the chief component is nuts.

THE little greenish pistachio kernels or the kernels from sweet almonds or walnuts are strung and then dipped in a vat containing a mixture of steam-prepared vegetable gelation with crystalline palm or date syrup. Dipping is done only when the temperature of the batch is almost at the solidification point, at which moment a few drops of attar of roses are added. When the rose flavor has been added and properly mixed the stringed nuts are at once lowered into the vat by the score of strings suspended from a frame. Then they are lifted out and allowed to dry, and the process is repeated, dip after dip, until a coating of the desired thickness is deposited on the nuts. It is a most sustaining confection, and the delectable rose fragrance of the zujak suffuses the palate and makes our own confectionery appear commonplace in comparison.

SMOKED fruits are as yet unknown to the tables of most Americans, but it is to be hoped that they will not remain so, for the experts say that they are wholesome and delicious and afford an excellent way of preserving superfluous fruit. Smoked figs and raisins are now imported from Italy for our Italian colonies. For fifty years smoked pears have come in large quantities from Germany for our

(Continued on page 76)

Uncle Jake says—

"The acid test of a man's Sunday religion is his Monday's behavior."

Many of the most critical food manufacturers have found from constant use, that KVP GENUINE VEGETABLE PARCHMENT and WAXED PAPERS are the best papers on the market for the proper packaging of food products.

Write for samples — or we will gladly have our representative call on you while he is in your territory.

Our Research Laboratory is at your service free of charge.

Uncle Jake of the
KALAMAZOO VEGETABLE PARCHMENT CO.
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Waxed and Parchment Papers Protect the Nations Food

FOOD PRODUCTS

Are largely responsible for Texas' great educational system. Supported as they are by public revenues, schools in a great agricultural empire like Texas are linked inseparably with food at its sources of origin, because Texas' farm and ranch products are worth a *billion dollars* annually.

SCHOOLS and ARMIES

Both advance on their stomachs, but schools do their advancing with more discrimination and permanent influence on markets. Health and food are inseparable and *health* is now accepted as the first duty of a school.

Texas has more than 30,000 public school teachers who direct the education of 1,370,000 children. Here are great market possibilities for the food manufacturer. The one adequate, economical way to cover these markets is through the advertising pages of

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write to Miss Marye Dahnke, head of our Home Economics Dept., for some of the interesting and helpful literature we have prepared on cheese and its uses? Cheese is such an important food that no one should be without a thorough knowledge of the great variety of ways to serve it as well as its dietetic value. This literature is free, just check off on the coupon below copies you would like and it will be a pleasure for us to send them.

Home Economics Dept.

Kraft Cheese Co., 402 Rush St., Chicago

Please send me the items checked below:

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  Cheese Salads & Main Dishes.

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Strange Foods of Other Lands

(Continued from page 74)

citizens of German origin. They have long been a staple product abroad; they are produced by the ton in the smoke chamber, or smoke loft, that is so frequently a part of a German farmhouse chimney.

Tamales south of the Rio Grande we have long known well; they are of the maize-and-meat variety, put up in the corn husks. But "the elder brother of all tamales," is the Mongolian rice tamal. (The "e" should be used only in the plural.) In America it can be found only in Chinatown. It is wrapped in rush leaves and is made like a miniature pyramid of rice pulverized with pork, pinon nuts and chestnuts. One is enough for a meal. The rush leaves in which it is steamed will preserve it for months. Placed in a cool, dry place, it gradually hardens without moulding and can be made fresh again by soaking and heating.

The largest tamal known is made in South America in the region of the Orinoco and the Amazon. It is called aliaka and is composed of minced chicken, chick peas and pepper, well cooked and bundled up in big banana leaves.

Research Findings

(Continued from page 70)

as to the vitamin content in strawberries. This raises the interesting question as to whether other berries are as rich in vitamin. Although equivalent to oranges and tomatoes in vitamin C, strawberries are only about one-fourth as rich in vitamin B and one-fortieth as rich in vitamin A as tomatoes and one-fifth as rich in vitamin A as oranges.

Although our vitamin studies and perforation studies had something in common in the initial steps the work in connection with perforations has taken a trend into rather technical sidelines of outstanding significance. Among our results are those that show that the electro-chemical relationship which was long supposed to exist between tin and iron does not exist. It has long been believed that tin is the more noble of the two metals. When two metals are in contact in the same medium in which corrosion may take place, the more noble intensifies the corrosion of the less noble metal. If this were true in a tin can, the tin would intensify the corrosion of the

(Continued on page 80)

Book Reviews

(Continued from page 72)

money and profit economy does not enable consumers long to obtain the required money," and third, that there is therefore "no possibility of sustained economic progress, and extreme alternations of prosperity and depression are inevitable." Examining the defects of our present money and profit economy it is argued that revolutionary measures will be of no avail, but that existing conditions may well be somewhat modified, especially by decreasing risks and by increasing our knowledge of the causes of profit and loss.

"BUSINESS Without A Buyer" gives in popular form the main arguments of "Profits" and of an earlier book, "Money." From different points of view it is shown that "business depressions are caused by general overproduction, and that general overproduction is a purely monetary phenomena." In answer to those who main-

(Continued on page 78)

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IF your food product is a health builder, tell school teachers how to use it to overcome malnutrition in children. Once convinced of the merits of your brand, teachers will

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In the Journal will be found articles dealing with the various phases of dietetic work, such as food problems and standards for equipment in the dietary department.

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Book Reviews

(Continued from page 76)

tain that there can be no such thing as general overproduction the authors reply that "there may readily be a general overproduction of goods in relation to the money which consumers offer in exchange for goods. — — — Every business depression is marked by that kind of overproduction."

IN "Profits" it was suggested that there was a way out of the seeming impasse created by the existence of plenty of goods and a dearth of purchasing power. "The Road to Plenty" presents the key to the situation. In conversational form, it deals with a discussion of economic matters by a group of persons on board a train. As a result there is evolved a way out of the "dilemma of thrift". Briefly the proposals are, (1) more complete statistical data should be collected, (2) this information should be considered by the government in making fiscal decisions, (3) a government Board should be created to make frequent reports as to business conditions, especially in regard to consumer income, and (4) if consumer demand shows a tendency to slow up, private industries are to be encouraged to make capital expenditures and, if necessary, expenditures for public works may be made by the Board.

"Advertising Research." By Percival White. New York. D. Appleton and Company, 1927. Pp. XXIII, 597. $6.00.

TO the advertiser who is interested in getting the most from his advertisements this book will be of unquestionable value. An introductory section dealing with scientific methods is followed by a treatment of the product in which is considered the problems of product analysis, of possible appeals, and of the use of the article as its own advertisement. Consumer analysis and market analysis are each treated in a chapter and four chapters are devoted to an examination of advertising media. After a rather complete treatment of advertising campaigns there is a concluding section on "Science and the Production of Advertisements" which deals with the planning of advertisements and with research applied to copy, layout, illustration, color, and typography.

"Direct Method of Determining Cyclical Fluctuation of Economic Data." By Martin Allen Brumbaugh. New York. Prentice-Hall, Inc., 1926. Pp. 73. $1.25.

THIS little book, by Professor Brumbaugh, of the University of Pennsylvania, was written "with the hope that it will prove both interesting and instructive to all those who — are concerned with the operation of the business cycle." Recognizing the unsatisfactory nature of present methods of eliminating trend and seasonal movements to isolate business cycles he attempts to obtain "directly the cyclical movements of any set of data." The method here set forth is much simpler than the orthodox procedure of analyzing business cycles. Whether or not it will be equally satisfactory can be told only after it has been given a thorough tryout.

"The Problem of Analyzing Local Business Conditions." By John R. Riggleman. Los Angeles. Eberle and Riggleman, 1927. Pp. 11.

AN address delivered at the annual meeting of The American Statistical Association in 1926. It presents some of the observations which the firm of Eberle and Riggleman, Consulting Economists, Engineers, and statisticians, have made in their work of analyzing economic conditions for the practical use of business men.

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This outfit includes a full size 8 ounce bottle of Certo; 50 booklets containing nearly 100 recipes for jams, jellies and marmalades; 50 souffle cups for serving the finished jams and jellies, and a very complete manual on jam, jelly and marmalade making.

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With this equipment it is possible for anyone even without previous practice to give in a 30 minute class or program period a most interesting and successful demonstration of the modern "one-minute-boil" method of making jams and jellies.

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Chicago Illinois

Home Economics Women in Business

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the Home Economist can suggest problems which can be solved to complete satisfaction within the organization. One worker recently outlined to me a joint study to be undertaken by her department and the engineering laboratories. At present many manufacturers prefer to conduct research projects through fellowships or grants to a university department. Often the investigation can be carried on more economically and more expertly in this manner. Moreover, in certain types of problems the findings of an academic research worker are more readily credited than a similar report from a company laboratory.

WE should not give the company Home Economist more credit than is her due. Many companies were already embarked upon an ambitious research program when their Home Economist was still an undergraduate. It is gratifying, however, to think of numerous instances in which it was the educational director of the Home Economist from the advertising agency who persuaded the company to back a research fellowship. Among the companies and associations which were reported at our annual business section meeting as maintaining grants or fellowships which might be considered a direct outgrowth of their Home Economics Departments are The Association of American Meat Packers, The Ball Brothers Company, The Borden Company, The Hills Brothers Company.

There is another activity of the Home Economics in Business woman which yields facts, this time as a by-product. The field work, extension service or demonstration activity which brings us into direct communication with consumers and trainers of consumers gives us, I believe, a familiarity with home standards and interests which cannot be entirely replaced by an agency or magazine survey. Our own activities are profoundly affected by these experiences. Even the words in which we phrase our recipes are modified as we learn the differences in cookery vocabulary in various sections of the country.

I have outlined the sources of our information: the collecting and classifying of existing data; research activities within the company or in cooperation with a university; observations from our field experiences. But I do not consider that we have done our duty by the facts if we merely pass them on to the advertising agency or the trained publicity writer. Few of us have won scientific repute; not many write easily in a popular vein. As I see it, our function corresponds to that of the electrical transformer — to step down the high-voltage technical reports of the scientists into terms in which the findings can be used by the publicist or copy writer without excusable distortion of fact. Prevention of false emphasis is another matter. That can be avoided only if we may pass upon the statements which we have sanctioned as they appear in their final resting place, the page of finished copy. Any Home Economist can speak with deep feeling of the awful things which can happen to a perfectly good recipe in the hands of a well-intentioned but space-economizing copy writer. I am happy to observe that the practice of submitting copy to the Home Economist for a final O. K. seems to be more common. There are still some companies who do not consult their Home Economist on copy. I am confident that the practice places a serious handicap on her educational activities, and I believe that the advertising also suffers.

YOU may have noticed that I have not distinguished between the fact-finding activities of the company and of the Home Economist of the advertising agency. Of course, in many cases all the work has to be carried on by one or the other. When a company which employs a full-time Home Economics worker is served by an agency which also retains a Home Economics consultant, there is by no means a duplication of effort. The company Home Economist has an opportunity to know a few products as no one outside can. As they say of the specialist, she is a person who "knows more and more about less and less." The agency woman, on the other hand, knows more of the interrelation of products and of consumer practices in general. Each can effectively supplement the knowledge of the other. As a company representative was heard to comment "Isn't it wonderful? What one doesn't think of the other does!" In my own experience, at least, I have found that A and B working together can do a piece of work more than twice as quickly, easily and effectively as A working alone.

Research Findings

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iron to a marked extent where the iron is exposed since the area of the tin is relatively so enormous. From this, it would be expected that perforations in a tin can would occur very rapidly, and it has long been a wonder that perforations did not occur more quickly. This led us to suspect that the tin may be less noble than the iron, and we now have data that definitely show that this is the case.